



C0 IR meeting – July 22, 2004

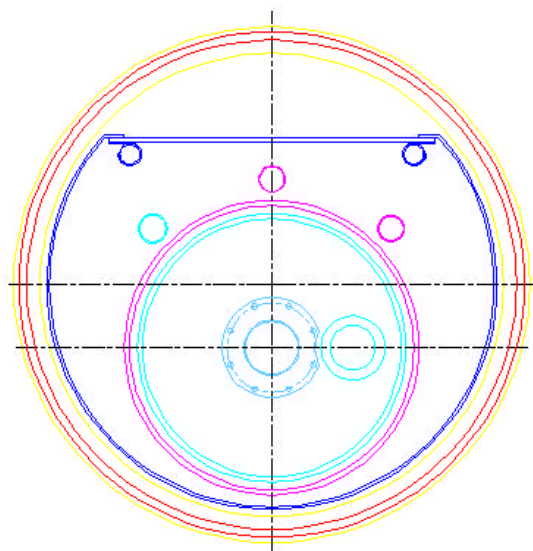
TNicol

BTeV quadrupole cryostat parameters

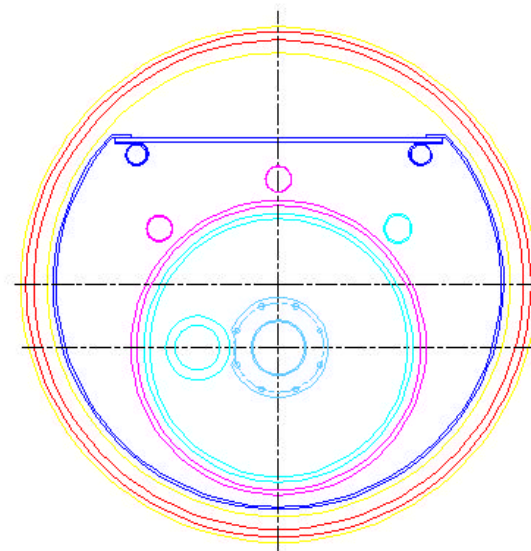
	Cold magnetic length	Interconnect configuration	Actual slot length
Q1	94.500	New interconnect using Tevatron cryogenics plus single phase, two phase, and shield returns.	143.000
Q2	169.875	New interconnect using Tevatron cryogenics plus single phase, two phase, and shield returns.	209.125
Q3	94.500	New interconnect using Tevatron cryogenics plus single phase, two phase, and shield returns.	135.875
Q4	79.000	Tevatron with small modifications to vacuum and single phase bellows and single phase flange (one end only).	117.275
Q5	59.000	Tevatron with small modifications to vacuum and single phase bellows and single phase flange (one end only).	97.275
X2	na	Tevatron with small modifications to vacuum and single phase bellows and single phase flange (one end only).	60.000
X3	na	New interconnect using Tevatron cryogenics plus single phase, two phase, and shield returns.	60.000

$\frac{BTeV}{Co}$

Q1 thru Q3 cryostat cross sections



Q1
through
Q3

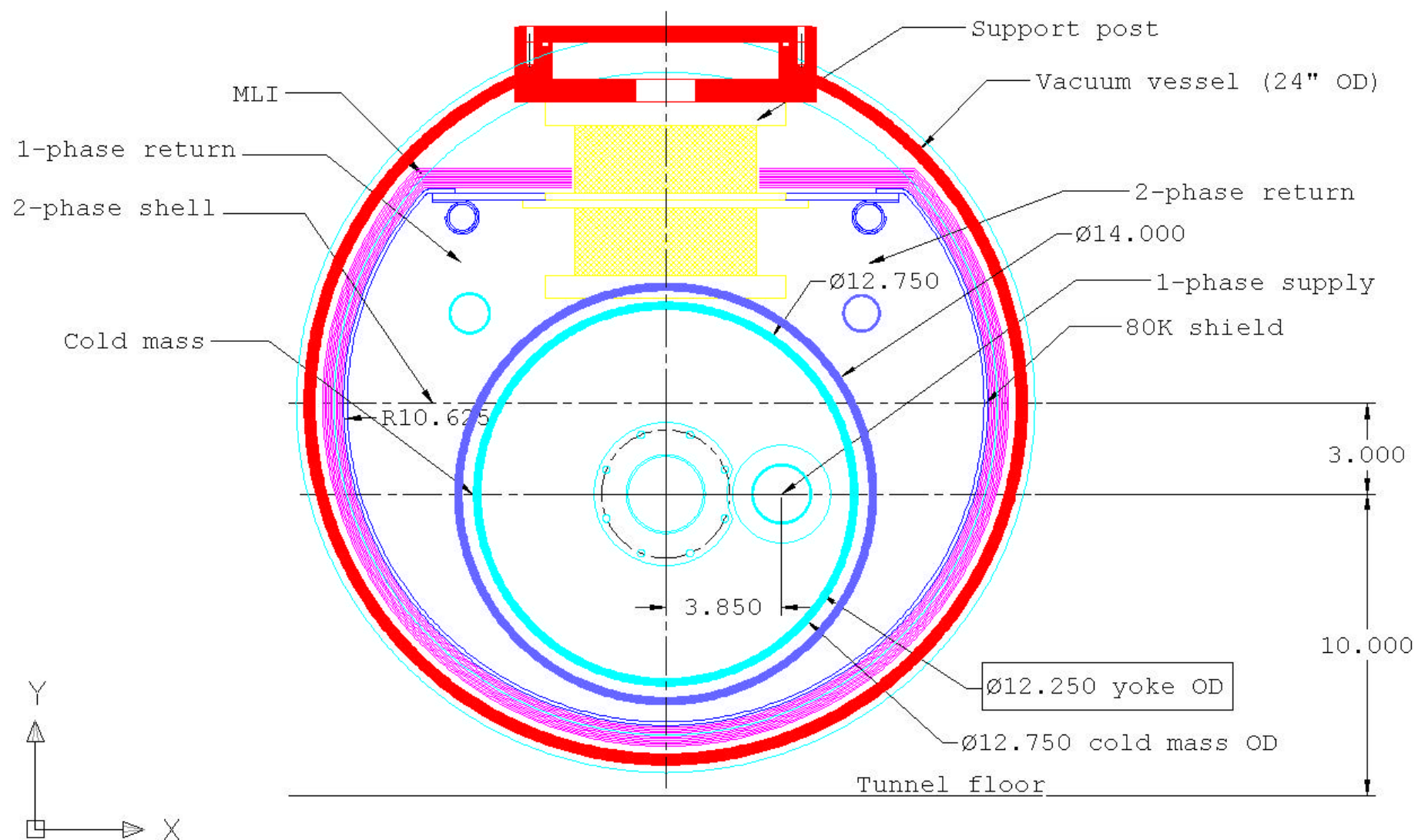


Non-IP end,
looking toward IP

IP end, looking
toward non-IP end

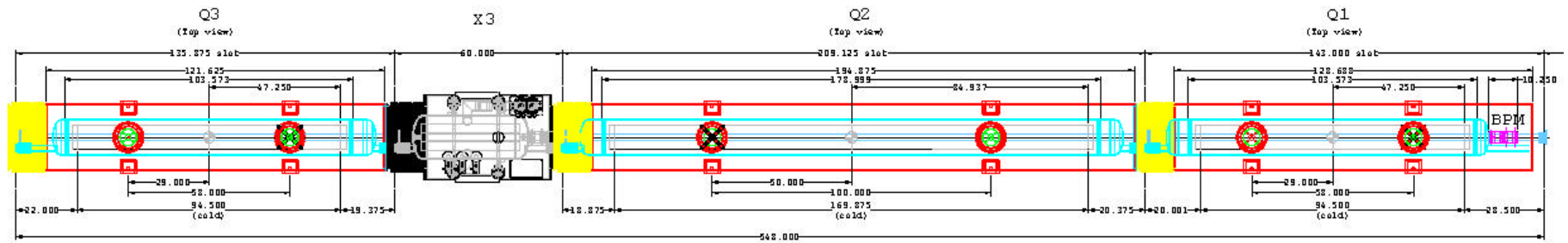
$BTeV$
 Co

Q1 through Q3 cryostat cross section

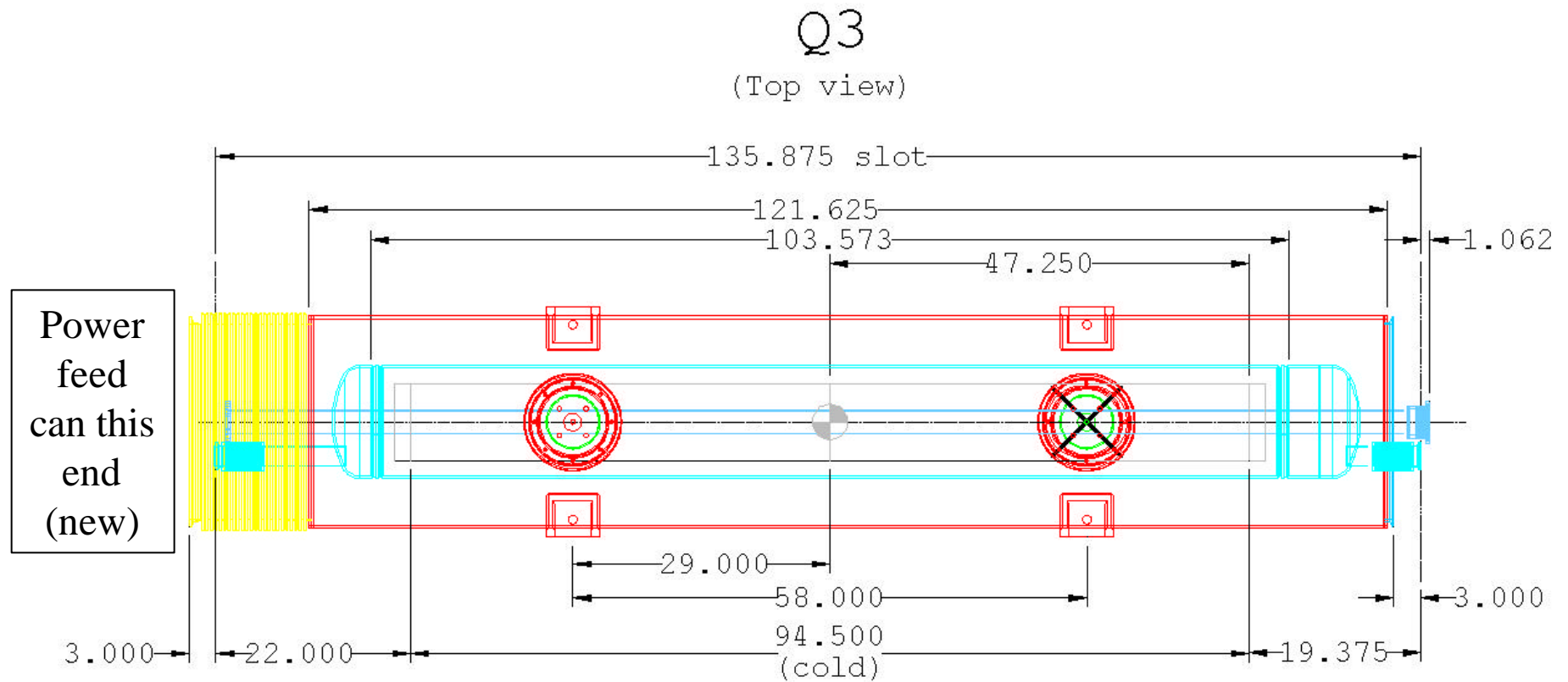


BTeV
Co

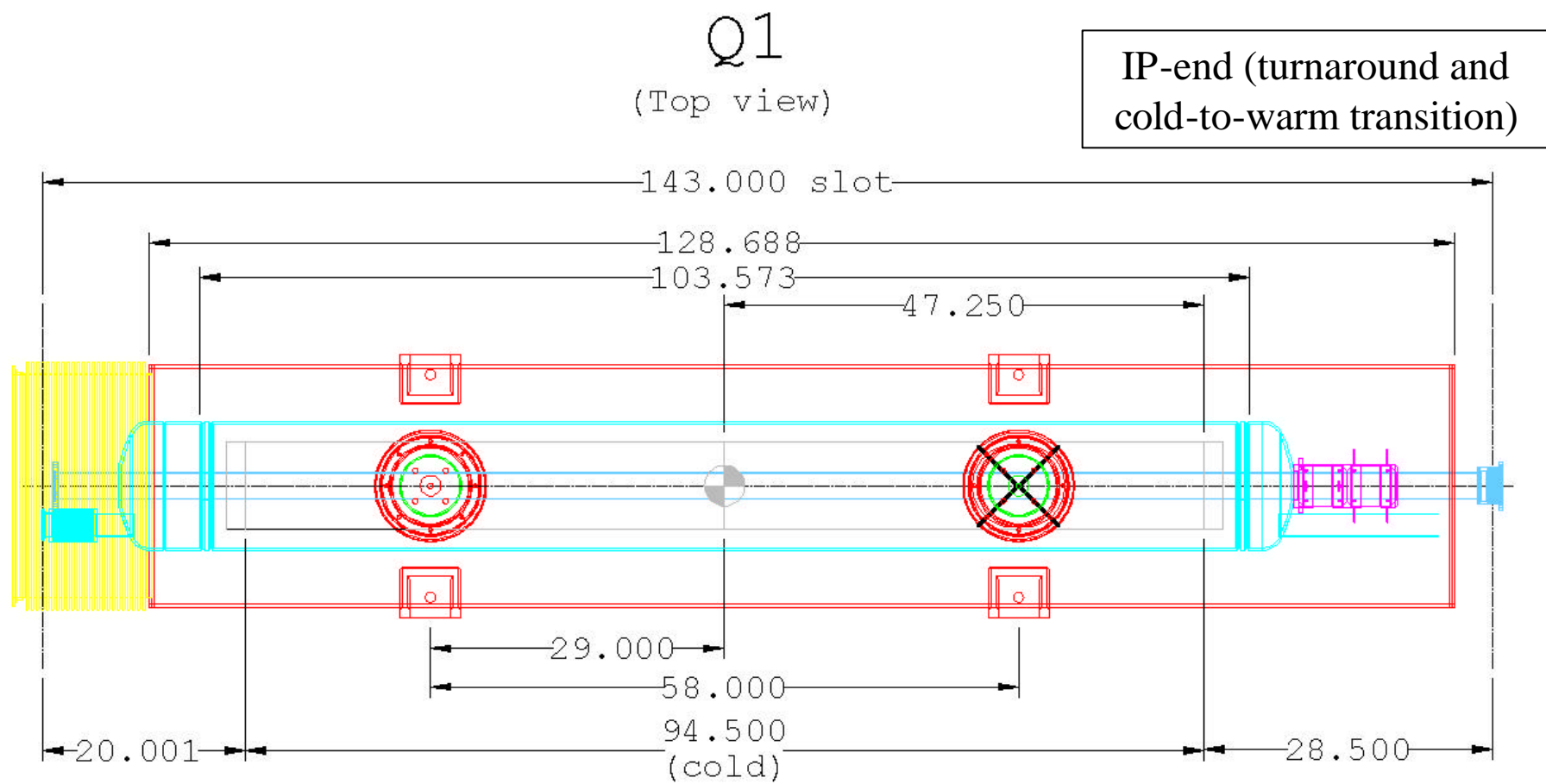
Triplet layout



$\frac{BTeV}{Co}$ Q3 upstream and downstream interconnects

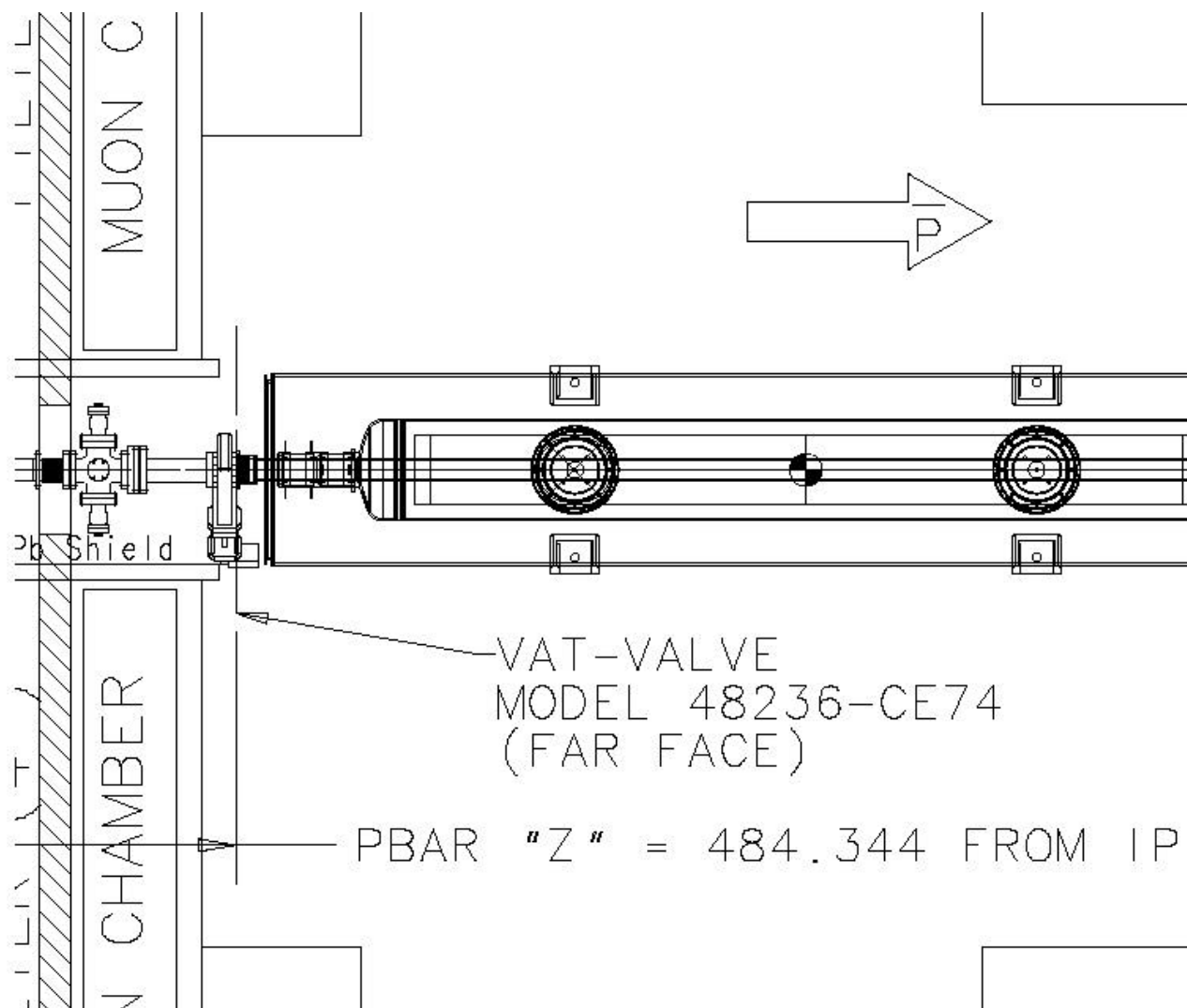


$\frac{BTeV}{Co}$ Q1 upstream and downstream interconnects



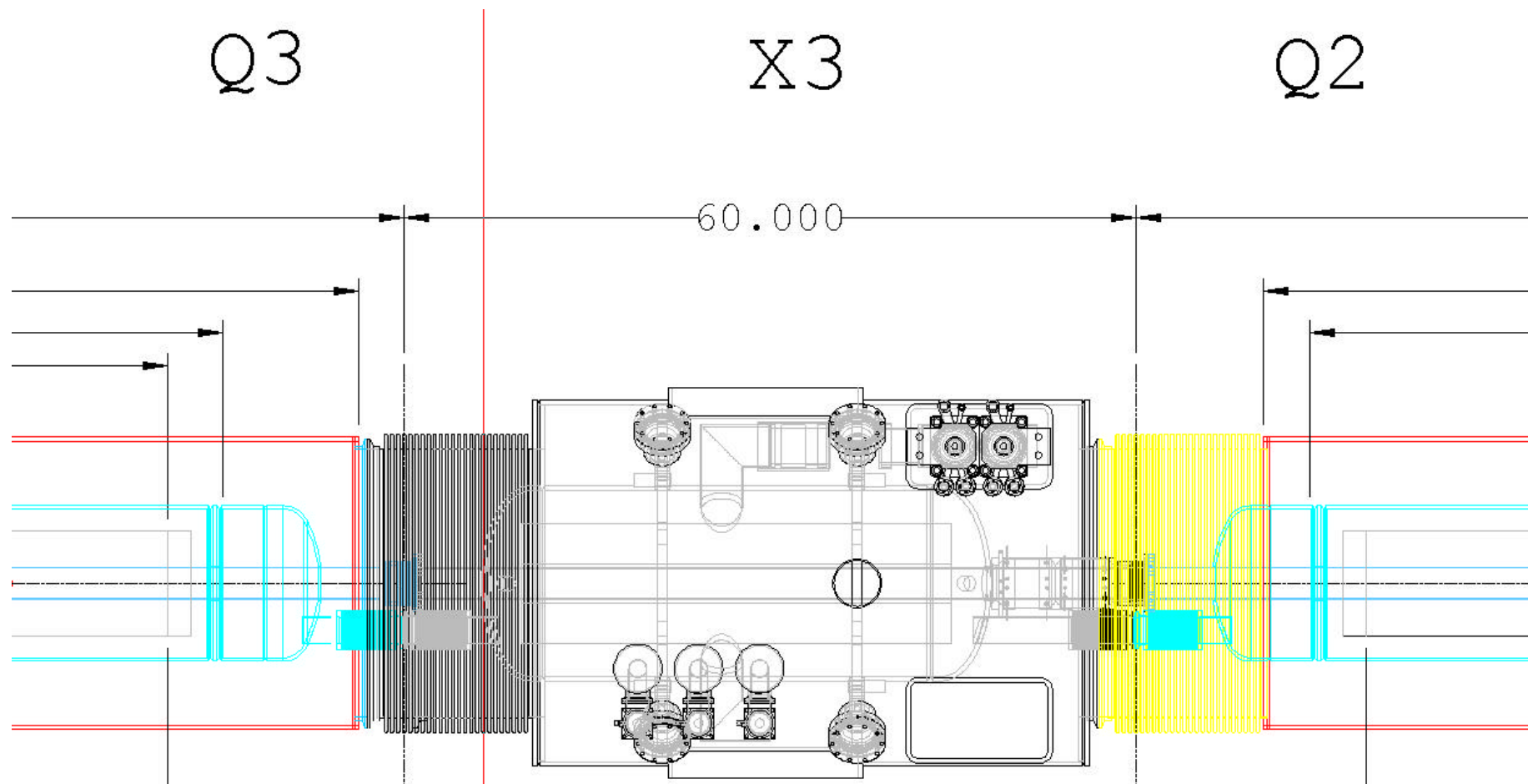
$\frac{BTeV}{Co}$

Q1 IP-end vacuum connection



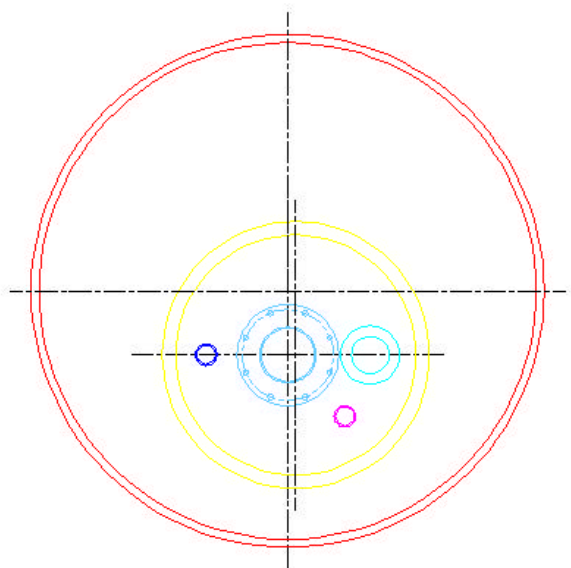
$\frac{BT_{eV}}{C_0}$

Q3, X3 spool, and Q2 interconnects



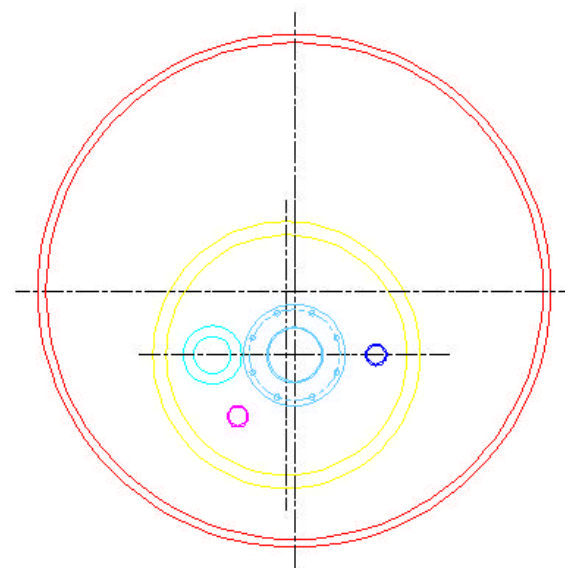
$\frac{BTeV}{Co}$

Q4 and Q5 cryostat cross sections



Upstream,
looking downstream

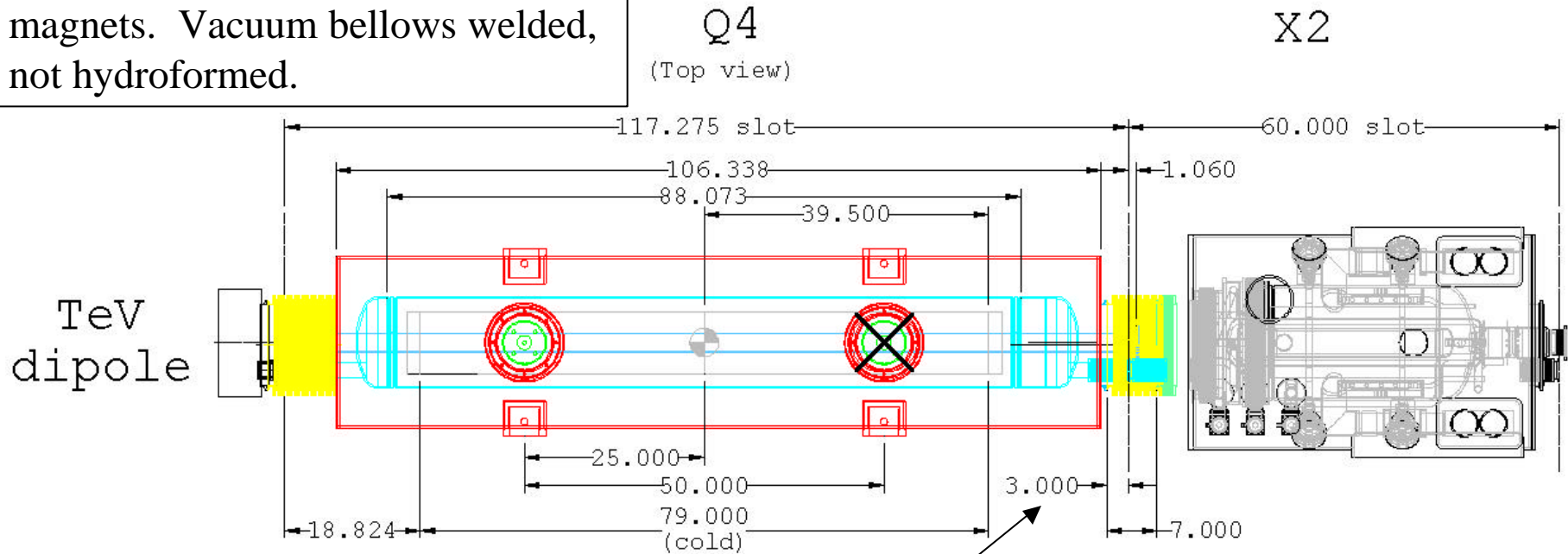
Q4
and
Q5



Downstream,
looking upstream

~~BTeV~~
Co

Vacuum flanges same as Tevatron magnets. Vacuum bellows welded, not hydroformed.



Single phase flange on
upstream end same as
Tevatron magnets
(1.75" Conoseal).

3" dimension increased
from 2.375" at
Tevatron magnet
interconnects.

Single phase flange on magnet downstream end larger to accommodate larger bus (2.25" Conoseal).

$\frac{B_{TeV}}{C_0}$ Q5 upstream and downstream interconnects

